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Subject: recontamination model for lagoon
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Attachments: [winmail.dat](#)
[message_body.rtf](#)

Eric and Chip -

If you're agreeable, I'd like to get the ball rolling re: getting Parametrix's help with a recontamination eval for the Swan Island Lagoon. Below are my initial thoughts on how to approach it. Please let me know how to proceed. Thanks!

Karen

Task: Estimate the change in sediment contaminant concentration in Swan Island Lagoon over time as influenced by stormwater discharges and the river itself.

1. For starters, define the lagoon as the long interior lobe, i.e., draw a line from the northern most part of Cascade General (CG) to the other side of the lagoon, forming a rectangle. Assume complete mixing within this rectangle.

2. Use Zidell's model as a starting point

4.1.1 COC concentrations in Stormwater Solids

- Assume that all of the runoff into the lagoon comes from the City's M 1-3 and S1-2 basins and the relevant subbasins at Cascade General and Port.

- Same methodology as Zidell for annual runoff volume/mass loadings. I probably have total square feet for City Outfall basins; will dig it out. Use CG stormwater eval report for area of their basins.

- DEQ will provide stormwater contaminant and TSS concentrations for each basin/subbasin.

4.1.2 COC Concentration in Upstream Sediment

- Use sediment PRGs as a starting point

4.1.3 Sedimentation

- Zidell used bathymetry data to develop a sedimentation rate. In addition to bathymetry data from LWG, there are probably other sources of information (dredging records?) that could be used.

- Zidell assumed that the sedimentation rate from the river is the difference between the total sedimentation rate and the sedimentation from stormwater sources.

- Sediment density - I'm open to suggestions if we want to deviate from their value (90 lbs/cf)

3. See attached email ("another thought") for more info on models (e.g., how to deal with multiple sources) from Kristine

4. Once we get the model set up we can start playing around with some of the variables.

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